

**Facility:**

Alcoa Mill Products, Inc. (formerly Alumax)  
1480 Manheim Pike  
Lancaster, PA 17601

**EPA RCRA I.D. NO: PAD049029697**

**Date of Inspection:**

July 30, 2014

**EPA Representatives:**


Stephen Forostiak

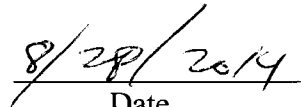
**PADEP Representative:**

John Pollock

**Facility Representatives:**

Steve S. Morinchin  
Environmental Technician

  
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Inspector Signature

  
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Date

### ***Inspection Summary:***

On July 30, 2014, John Pollock, PADEP inspector and I, Stephen Forostiak arrived at Alcoa Mill Products (Alcoa) in Lancaster, Pennsylvania at approximately 8:30 am. We introduced ourselves to the security guards who paged Mr. Steve Morinchin, Environmental Technician for Alcoa. Mr. Morinchin introduced himself and I displayed my credentials. Mr. Morinchin escorted us to his office where I explained the purpose of the visit. Mr. Morinchin said Alcoa currently employs about 857 people at this location and operates 2 shifts over 24 hours a day for 7 days per week. The facility operates over about 57 acres.

### **PROCESS DESCRIPTION**

Alcoa manufactures aluminum sheets and plates.

#### **Aluminum Sheeting**

Approximately 500 million pounds of sheets are produced each year by Alcoa. Sheet manufacturing begins with prime and scrap aluminum being melted and formed into ingots of sizes ranging from 27 to 63 inches wide, 25 inches thick to about 220 inches long. These ingots are then placed in reheat furnaces located in the Hot Mill building and then hot rolled in to sheets down to around 140 gauge thickness to approximately 1000 feet in length. The sheets are rolled then taken to the cold rolling building. The sheets are then cold rolled to the desired thickness then taken to the annealing furnaces so that the metal can be tempered. Next the rolled sheet is cut to a final width then may be taken to the coating line for painting. According to Mr. Minchin approximately 60 million pounds of metal is painted per year. Alcoa purchases about 250,000 pounds of paint each year. Mr. Morinchin said that the painting operation is where most of the hazardous waste is generated.

#### **Aluminum Plating**

Alcoa manufactures about 20 million pounds of plates each year. Prime and scrap aluminum are melted and casted into plates of various sizes and thicknesses. Plates are taken to the annealing furnaces for tempering. The plates are cut to final dimensions and then sent through an x-ray machine to verify its thickness. According to Mr. Morinchin no hazardous waste is generated during this process.

## **OBSERVATIONS**

### **CASTING HOUSE**

The casting house is where the raw materials are melted to create the ingots. There are 12 total furnaces, 6 are used to melt the raw materials and 6 are used to hold the molten metal until tested to confirm mixture of alloys is correct. There are actually 6 stations and at each there is 1 molten and 1 holding furnace next to one another (back to back). The stations are numbered starting at 5 to 10. Once the alloy mixture is confirmed the molten metal is emptied into a casting pit. There are only 3 casting pits. Once the molten metal is in the casting pit it will be formed into ingots of about 25 inches thick 56 inches wide and 212 inches long; see photo 4. There are 2 baghouse dust collectors hooked up to catch fugitive dust from furnaces. Bag House # 1 is connected to numbers 5-8 stations. Bag house 2 is connected to number 9 and 10 stations. To protect the filter bag house #2 uses kiln dust to coat the filter for protection from the heat. According to Mr. Morinchin this waste is not hazardous waste according to the profile. Bag House #1 uses water to protect the filter and the waste from this is considered hazardous waste. Photos 1-3 show the marked area, the 30 yard container used to collect it, and the label on this container, respectively. The date on the container was 07/02/14. No other hazardous waste collection areas were observed during the walk through of the casting area.

### **HOTMILL BUILDING**

The Hotmill building is where the ingots are pressed and rolled into a certain thickness. One of the stations the ingots may go through is the cladding machine. For this the ingot is scalped or planed on one face then a plate is placed on this side. The ingot is flip and this procedure is repeated. The plate is formulated to be corrosion resistant. These plates will be melted and rolled out providing protection to both sides of the metal coil. This process is a small part of Alcoa's production. All ingots with or without the extra plates are taken to the reheat furnace. There are 8 reheat furnaces and each furnace can hold up to 14 ingots at a time. From the furnace the heated ingots are placed on rollers and moved to the 80 inch Reversing Mill. The ingots are moved back

and forth under a roller that reduces the thickness down to about 1 inch. The lubrication used is oil and water. About every other month the oil is replenished while the spent oil is collected and sent to a recycler. The waste water is sent through the waste water treatment. Mr. Morinchin said Alcoa wastewater treatment is permitted by Lancaster Sewer Authority. The rolled metal is first taken to a cutter to have the ends trimmed then to the 72 inch three stand hot mill. The metal is rolled to a thickness of 140 to 300 gauge. According to Mr. Morinchin there is no hazardous waste produced in these area except for the filters used for the lubrication system. The metal is then coiled and taken to the cold roll area.

### **COLD ROLL MILL**

The cold roll mill has 4 mills. These mills roll the metal to final specifications. The Bliss Light Mill rolls to the metal to the thinnest thickness. The other mills are named Tandem Bliss, Bliss 2 and Hunter Mill. The lubrication used here is mineral oil that has a flash point of 250 ° Fahrenheit. The lubricant is filtered using diatomaceous earth and filter paper. These filter out the metal fines which are then taken back to and used as raw material in the initial process.

The next process for the coiled metal is the annealing or tempering. This is when the entire coil is heated to release stress and then allowed to cool. No hazardous waste collection areas were observed in these areas.

### **HUNTER COATING LINE**

The hunter coating line is a corrosion protection using chromic acid and is one of the coatings that may be used. The coiled metal is unrolled and travels first through a detergent bath to clean the metal surface of contaminants. The detergent used is Betz Kleen 4000. After the metal goes through this bath it is sprayed with citrus water to remove any loose debris. This waste water is captured in the tank beneath this operation then pumped to the waste water treatment system. Mr. Morinchin showed us the filter press and stated that the material from the press is nonhazardous waste. The next process the metal goes through is the application of the chromic acid (Permatreat 1904). The

chromic is dripped on the metal and rolled to evenly spread the coating. The metal then travels through a heater to cure the coating. The other coating performed is a non-chromic solution (Permatreat 1021B), which is applied in the same way. Next to this coating line is a 55 gallon container used as SAA for contaminated personal protection equipment and rags which may contain chromic acid. There is also a 330 gallon tote with Chromic acid waste considered as a 90 day storage container which was labeled and dated; see photos 7 & 8. This tote receives the spent chromic acid from the basin below the coating line. Next to this tote was a 55 gallon container considered 90 day HW storage. This 55 gallon container collects the Permatreat 1021 B non-chrome material. Mr. Morinchin said since this material is running through the same lines as the chromic acid material Alcoa treat this container as HW. The waste Permatreat 1021 B when mixed with the chromic acid waste would cause the waste to jell. Since this created an issue with pumping waste out of the tote the wastes materials are kept separate. This 55 gallon container was labeled and dated with 7/25/2014.

## **SPLITTERS**

There are five splitters numbered from 8 to 12. These cut the metal to width and trim the edge square. Number 12 is used for cutting the thickest gauge metal. At the number 11 splitter there was 1 SAA used for collecting rags soaked with Kensol 30, mineral spirits. The rags are generally used with to clean the coils with the solvent and to soak up any spills. The container was marked with the waste code D001.

## **MAINTENANCE STORAGE CRIB**

The maintenance storage crib area was observed with 1 SAA which collected paint scrapings from areas throughout the site that have been refurbished. The paint scrapings are believed to contain lead.

## **BLANKING AREA**

In this area is where various diameter sizes of circles are punched out of plates. There are only 2 punch machines used for this process and no SAA's were observed in this area. This is also where the coils are packaged and stored until shipped.

## **PAINT LINE BUILDING**

This is the other metal finish coating process. Coils can be primed and or finish coated. This line is a continuous line starting first with a cleaning solution bath then followed by a water rinse which is then followed by the conversion coating using Betz 1904 chromic acid. There is one 55 gallon container at this area used to collect acid soaked rags and contaminated personnel protection equipment. Underneath the chrome acid application is a pit which collects the acid waste which will be pumped to the acid tank; see photo 9. At the time of this inspection the acid tank was empty as indicated by the float indicator; see photo 10. There was a label on the tank as seen in photo 11. The daily inspection log was hanging nearby on the waste water treatment area; see photo 12. The waste water filter press yields nonhazardous waste according to Mr. Morinchin. In the paint mixing room is where the still is located. The still is used for solvent recovery and still bottoms are removed and handled as HW with F005 waste code. The still has a bag with in it for collecting the bottoms. This bag holding the still bottoms is removed and replaced with a new bag insert. There are two 90 day HW storage containers, 1 used to collect the still bottoms, contaminated PPE and rags and 1 used to collect waste paint. There is a wash hood in this area which is used to clean scraper blades and other parts from the machinery. Methylethyl ketone is used to clean the parts. The wash hood has a basin to collect the solvent drippings which flow to a drain. The wash hood drains into a 5 gallon bucket that was empty at the time of the inspection. The other line is the finish coater where paint is applied to the metal. There is one 55 gallon container considered a SAA next to this line and collects waste from cleaning out he paint lines. The metal leaves this area and travels to the curing ovens. Next to the curing oven is a 90 day storage area holding about 8 containers. The containers were labeled as HW and dated. All the accumulation dates marked were for the month of July 2014.

## **PLATE FACILITY**

Approximately 16 to 20 million pounds of plates are produce each year. Raw products area heated and casted to form plates. The plates are placed in to stress relieving ovens then milled to desired thickness. The milled plates are sent through an x-ray machine to verify their thickness. There are 3 bag houses associated with this process area. The filter bags are coated with lime dust and disposed of as nonhazardous waste.

## **BUILDING 62 WASTE STORAGE & UNIVERSAL WASTES STORAGE AREAS**

I observed 6 HW labeled 55 gallon containers marked as chrome contaminated solids. Each container was dated no later than June 30 2014. There were 40 HW labeled 55 gallon containers marked as waste paint and all were dated no later than June 2 2014; see photo 13. Two HW labeled containers were observed marked as waste fuel; see photo 14. I observed 1 container of universal mercury waste equipment labeled as such and dated 6/20/2014. Another container observed was labeled as universal waste lamps and dated 7/24/2014. Mr. Morinchin then showed us the storage area for the universal waste batteries, which was located just outside the Hot Roll building. There were 2 lead acid batteries observe in this area and both were dated 7/29/2014. They are stored in a metal unit attached to the building and sitting about 3-4 feet from the ground. Next Mr. Morinchin showed us where the universal fluorescent bulb wastes are stored. We were taken to the electrical conduit storage shed. This shed is located next to the cooling towers. The waste lamps are placed in a cardboard box which is placed inside a metal box with the side attached to the lid; see photo 15. These metal boxes were labeled and allow the workers the ease of lifting the lid and sliding the waste bulbs in the open cardboard box. There were 2 boxes that contained waste bulbs with the accumulation dates of 2/01/14 and 7/5/14. In the past Mr. Morinchin said they always had a problem keeping the cardboard box lid closed to meet the requirements.

## **STORE ROOM**

Along the store room wall was more universal waste storage. I observed three 5 gallon containers, but only 2 contained waste batteries. The 2 containers were labeled as universal waste batteries with an accumulation dates of 7/16/2014. Six batteries next to these containers were not labeled as universal waste and Mr. Morinchin said the date contained on them was not the accumulation date, but rather the date the batteries were placed in the equipment; see photo 16.

## **LABORATORIES**

The chemistry laboratory is where Alcoa checks the cooling tower water, hot roll emulsion, cold mill additives, viscosity of the equipment lubrication, and the effluent for the waste water treatment. This lab has 2 SAA. One is a 5 gallon carboy labeled as HW and listed as solvent waste. The other SAA is also a 5 gallon carboy labeled as HW solvent. Mr. Morinchin stated the hydrochloric acid waste generated in this lab is taken to a 55 gallon SAA located through double doors and next to the hunter coating line; see photo 17.

The physical testing lab is where anodizing and etching occur. There are 4 tanks of baths with acids and caustic divided with detergents and rinse water. Mr Morinchin said that when the acids are determined to be waste the tank is emptied in to a 330 gallon tote. This tote is taken to the waste acid tank and emptied in to the tank. The caustic tanks when determined to be waste are emptied into a 55 gallon container and then managed as HW.

## **DRUM STORAGE AREA**

### **90 day Storage Area**

This area is located outside and at the beginning of the Mill Finishing. No containers were observed in this area at the time of the inspection.

### **Aerosol Can**

Very few aerosol cans are used by Alcoa, but if aerosol cans are spent then discarded into a container and managed as HW. I did not observe any used



aerosol cans being discarded in any containers whether labeled as general or hazardous waste.

## **RECORDS**

The following records were reviewed;

### **Hazardous Waste Manifests**

I reviewed hazardous waste manifest records for 2013. The HW manifests observed were signed by the designated facilities. The following were designated facilities observed on these manifests;

1. Clean Harbors Eldorado, LLC RCRA ID. NO. ARD069748192
2. Clean Harbors Deer Park, LLC RCRA ID. NO. TXD055141378
3. Spring Grove Resource Recovery Inc. RCRA ID. NO. OHD000816629
4. Chemical Waste Management of the NW RCRA ID. NO. ORD089452353
5. Safety Kleen Systems, Inc. RCRA ID. NO. PAD000738849
6. Safety Kleen Systems, Inc. RCRA ID. NO. ILD980613913
7. Enviroline of PA, Inc. RCRA ID. NO. PAD010154045

### **Land Disposal Restriction forms**

Land disposal restriction forms were observed with the hazardous waste manifest reviewed. LDR forms were observed for each waste stream and designated facility listed in the waste manifests.

### **Biennial Report**

Copies of biennial reports for the 2011 and 2013 reporting years were reviewed. I did not observe any discrepancies.

### **Contingency plan**

The Contingency plan reviewed was dated November 2013 and describe the arrangements with the local authorities. The emergency coordinators names, phone numbers and home addresses were listed. The plan did described the evacuation plan signals and exit routes. A list of all emergency equipment and its location in the facility was contained in the plan.

### **Training Records**

Mr. Morinchin provided a list of employees and training along with their job titles. I also reviewed examples of the job descriptions which explained duties as they relate to hazardous waste.

#### HW inspection logs

Hazardous waste inspections are performed weekly and tank inspections are performed daily. No gaps were observed during the review of the inspection logs. Alcoa provided a copy of the tank certification; see attachment 2.